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DESCRIPTIONS OF SOME NEW TREE HOPPERS FROM THE UNITED STATES.

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In studying the life histories and food plants of the *Membracidae* it was discovered that in a number of cases two or more different species of *Telamona* were being confused under one name in collections. In order to remedy this and to bring the genus up to date the following species are described and food plants noted.

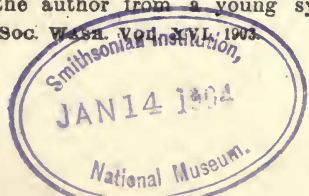
Telamona pruinosa, sp. nov. Plate I, figs. 7, 7a, and 7b.

Size and form of *monticola*, nearly, but with a more upright hump and prominent humeral angles. Testaceous powdered with white. Length 10 mm; width 6 mm.

Pronotum rising perpendicularly above the lateral angles in front, upper margin at first convex, then slightly sloping and angled with the posterior margin which inclines a little, forming a large and almost rectangular hump on the anterior half. Humeral angles prominent, acute, half longer than the eyes.

Color.—Pale testaceous washed with pale cream or greenish-white especially on anterior half of pronotum and face. This gives the whole insect a powdered appearance.

Described from five females from Illinois and Iowa. The Iowa specimens collected by the author from a young sycamore tree. The



powdered greenish color harmonizes well with the young branches on which they were resting.

Telamona viridia, sp. nov. Plate I, figs. 3, 3a, and 3b.

Resembling *pyramidata* in size and form but with less of a hump. Grass green, the male with some fuscous on posterior half of hump and again at apex of pronotum. Length ♀ 11 mm., ♂ 9 mm.; width ♀ 5.3 mm.

Pronotal hump in the shape of an obtuse pyramid one-third the distance back from eye to apex of pronotum, a slight angle on posterior margin just below apex especially marked in the male. Height of hump slightly less than one-third the pronotal length. Humeral angles broad, slightly rounded, a trifle longer than eye.

Color.—Female, grass green slightly mottled with yellow, carina light except at apex of hump and at tip where it is tawny. Male grass green, carina light interrupted with tawny; a fuscous band runs obliquely backward from apex of hump and fades out before reaching the pronotum proper or sometimes connects with a tawny spot on lower margin, whole apex of pronotum tawny.

Described from eleven specimens from Colorado and Iowa, collected by the author, and one from Illinois. This species occurs on the cottonwood (*Populus monilifera*), where its green color and rounded form imitates the larger terminal buds that form in the fall. The larvæ are of a mottled gray and hide in the rough bark.

Telamona obsoleta, sp. nov. Plate, I figs. 2, and 2a.

Resembling *irrorata* but smaller and with a smaller and more rounded hump. Length ♀ 10 mm., ♂ 9 mm.; width 5 mm.

Dorsal hump low and much inflated; it scarcely narrows from the base to just before the apex where it rounds in to form a carina. Anterior margin rising just back of the humeral angles and extending from there half way to the apex of the pronotum. The height is about equal to the whole length and it rounds down to the pronotum proper at both extremities. Front much elevated above the level of the eyes so that the ocelli are farther from the base of front than from each other.

Color.—Yellow with the punctures fuscous, sometimes coalescing into brownish fuscous spots giving the whole insect an irrorate and mottled appearance with little regularity of pattern. Usually there is a semicircle of lighter shade back of the humeral angles and a light spot on middle of hump. There is a pair of large straggling black marks above and within the eyes, some brown on the inner nervures of corium, and a smoky brown cloud at apex.

Described from six specimens collected by the author at Ames, Iowa, and one from Onaga, Kansas (F. F. Crevecoeur). This species occurs on the elm, both larvæ and adults being found in the crevices of the bark

of the trunk or large branches, where their mottled gray color renders them very difficult to detect.

Telamona extrema, sp. nov. Plate I, figs. 1, 1a, and 1b.

Form of *unicolor* nearly, smaller and with a still longer hump. Greenish testaceous. Length ♀ 10 mm., ♂ 9 mm.; width 5 mm.

Pronotal hump very high, almost quadrate, occupying the anterior three-fifths of pronotum, anterior margin rising perpendicularly from face, crest highest just back of the well-rounded anterior angle from which it slopes slightly to the almost perpendicular posterior face. Humeral angles moderate, as long as the eyes.

Color.—Greenish testaceous; a spot above each eye and the median carina back to the posterior angle of hump fuscous; posterior face of hump broadly marked with creamy white which narrows to a line on the carina posteriorly in the female, and disappears entirely in the male. The lower margin of the humeral angles is sometimes marked with fuscous.

Described from two females collected by the author at Ames, Iowa, and a pair collected in Marion County, Kansas, by F. M. McElfresh. The two Ames specimens were beaten from a patch of second growth oak.

Telamona lugubris, sp. nov.

Form of *reclivata* nearly, slightly shorter and stouter built and with a lower and longer hump and lacking the markings of that species. Obscurely greenish brown. Length ♀ 11 mm, ♂ 9.5 mm; width 5.5 mm.

Dorsal hump of moderate size, arising just back of lateral angles; anterior margin sloping back, forming a right angle with the inclined crest, posterior margin perpendicular or slightly overhanging. Base of hump occupying a little over two-fifths of distance from humeral angles to apex of pronotum. Humeral angles blunt and obtuse, about two-thirds as long as the eye.

Color.—Pale yellow, the more or less darkened punctures giving the insect a general grayish cast with still darker shadings on the lateral faces of the hump and sometimes on the apex of pronotum.

Described from six specimens from Ames, Iowa, collected by the author, and one from Onaga, Kansas, collected by F. F. Crevecoeur.

The larva of this species was found quite commonly on the trunks of the scrub oak, feeding on the little sprouts and hiding in the crevices of the bark. The adults were found on the small limbs.

Telamona decorata, sp. nov. Plate I, figs. 6, and 6a.

Smaller than *lugubris*, with a shorter and more rounding hump. Yellowish fuscous with the hump deep testaceous brown. Length 9 mm.; width 4.5 mm.

Dorsal hump sloping up from both front and rear, crest rounding, highest just in front of the middle, hump occupying scarcely two-fifths of the pronotum from the humeral angles back. Humeral angles short and blunt, about two-thirds the length of the eye.

Color.—Face and pronotum pale yellow very slightly washed with brown in the female, and with a definite brown shade in the male, median carina alternately light and dark before the hump. Hump rich testaceous with a few light spots on the sides, a definite light mark at the base in front, which may extend up onto the carina, and the whole posterior margin light. This latter light spot extends down on to the pronotum and connects with an irregular transverse light band about half way to apex. Each side of this band is an irregular testaceous band, the anterior one connected with the testaceous hump. A pair of spots above the eyes and the apex of elytra brownish fuscous.

Described from six specimens from Ames, Iowa, collected by the author, one from Onaga, Kansas (Crevecoeur), and a pair from Arkansas (McElfresh). The Iowa specimens were all taken from the smaller branches of the red oak.

***Telamona compacta*, sp. nov.** Plate I, figs. 5, and 5a.

A small, compact, testaceous and white species with a low almost quadrangular hump. Length 8–9 mm.; width 4.3 mm.

Dorsal hump sloping up from above the humeral angles, highest just back of the rounding anterior angles, crest straight or nearly so, sloping posteriorly, the posterior margin very slightly sloping and subangulate with the crest. Hump extending slightly more than half the distance from the humeral angles to the very short and blunt apex. Humeral angles short and blunt, about two-thirds the length of the eye.

Color.—Rich testaceous marked with creamy white, as follows: a number of small spots just above the face, an angular or stellate spot in front of the hump, the posterior margin of hump and a transverse band half way between there and apex of pronotum. Usually a spot or two on lateral face of hump and one on margin below hump. Elytra smoky testaceous with a hyaline band across the base of the apical cells.

Described from a pair from Ames, Iowa, collected by the author, and two females from Arkansas collected by F. M. McElfresh. The pair from Iowa were taken from a patch of mixed oaks.

***Telamona ehrhorni*, sp. nov.** Plate I, figs. 4, and 4a.

Form of *sinuata* nearly but smaller. Dark fuscous brown prettily ornamented with light. Length ♂ 8 mm.; width 4.5 mm.

Dorsal hump long, rather high, rising on a line with the humeral angles, anterior margin straight, inclined backwards, crest roundly angled in front, sloping posteriorly, slightly emarginate on the posterior half. Posterior margin short, inclined, rounding to the pronotum. Hump occupying nearly three-fifths of the distance from the humeral angle to apex of pronotum.

Color.—Deep brownish fuscous, face and lower margin of pronotum mottled with creamy yellow, a reniform yellow mark with a dark center in front of the hump, a large yellow crescent on each side extending from the middle of the humeral angle nearly half way to the apex and enclosing a few irregular dark spots, an inverted crescentic line extends from a point below the middle of crest. The posterior face of hump is light and this light area connects posteriorly with a transverse light band.

Described from one male taken at Flagstaff, Arizona, by E. M. Ehrhorn, who is doing good work in the scale insects, and who has sent me many fine *Hemoptera* from lower California.

***Telamona pulchella*, sp. nov.** Plate I, figs. 9 and 9a.

Resembling *coryli* but much smaller and with a lower, longer hump. Length 5.5-6 mm.; width nearly 4 mm.

Dorsal hump arising in front of the lateral angles but still back of the face and pronotal line, anterior face perpendicular, crest slightly sloping posteriorly, both angles slightly rounding, posterior margin sloping and rounding into a very marked carina on the apical portion of pronotum. Besides this there are three well marked lateral carinae on the posterior half of the pronotum. Humeral angles long and acute, nearly twice as long as the eye.

Color.—Pale creamy yellow, the lateral angles pale testaceous, the lower margin lined with white which is again margined internally with black. Hump testaceous, omitting the lower half of each margin and an irregular light stripe on the median third. This stripe usually narrows on the middle and then expands into a crescent below. The testaceous on the posterior part of hump extends down to the margin of pronotum and there are a few irregular markings towards the apex.

Described from three specimens collected by the author in southern Colorado. Taken on the scrub oaks of the foot hills.

***Telamona brevis*, sp. nov.** Plate I, figs. 8 and 8a.

Form of *obsoleta* nearly, much smaller and shorter. Smaller and darker than *pulchella*, dark fuscous brown mottled with pale. Length 5 mm.; width nearly 3 mm.

Dorsal crest low, rounding from the anterior margin of pronotum to a point more than half way back from the humeral angles, from here it slopes quickly into the curve of the pronotum. Humeral angles large, stout, half longer than eye.

Color.—Fuscous brown, variable, hump darker, omitting the posterior margin and a crescent on each side. An oblique band runs down from the posterior half of hump to the lower margin of pronotum.

Described from three females collected by the author in southern Colorado. Taken from oak along with the preceding species.

EXPLANATION OF PLATE.

- FIG. 1. *Telamona extrema* sp. nov., lateral view. 1a. Anterior view;
1b. Dorsal view.
- FIG. 2. *Telamona obsoleta* sp. nov., lateral view. 2a. Anterior view.
- FIG. 3. *Telamona viridia* sp. nov., lateral view. 3a. Anterior view;
3b. Dorsal view.
- FIG. 4. *Telamona ehrhorni* sp. nov., lateral view. 4a. Anterior view.
- FIG. 5. *Telamona compacta* sp. nov., lateral view. 5a. Anterior view.
- FIG. 6. *Telamona decorata* sp. nov., lateral view. 6a. Anterior view.
- FIG. 7. *Telamona pruinosa* sp. nov., lateral view. 7a. Anterior view;
7b. Dorsal view.
- FIG. 8. *Telamona brevis* sp. nov., lateral view. 8a. Anterior view.
- FIG. 9. *Telamona pulchella* sp. nov., lateral view. 9a. Anterior view.